

LSI DOCKET NO. 03-1127

CLAIMS:

What is claimed is:

1. A method for serial port initialization in a storage controller, wherein the storage
5 controller includes a serial port for connection to an external device, the method comprising:
receiving at least one serial port parameter value for a set of serial port parameters,
wherein the at least one serial port parameter is selectable by an operator; and
initializing a serial port on the storage controller using the received serial port parameter
values.
10
2. The method of claim 1, wherein receiving at least one serial port parameter value
includes:
presenting a boot menu, wherein the boot menu includes a serial console mode;
receiving a user selection of a serial console mode;
15 presenting the serial console mode; and
receiving operator selection of at least one serial port parameter value in the serial
console mode.
3. The method of claim 1, wherein receiving at least one serial port parameter value
20 includes:
establishing a connection between a host device and the storage controller; and
receiving the at least one serial port parameter value from the host device.
4. The method of claim 3, wherein receiving at least one serial port parameter value
25 includes:
authenticating an operator of the host device before receiving the at least one serial port
parameter values from the host device.

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5. The method of claim 1, wherein the set of serial port parameters includes at least one of a baud rate, a number of data bits, a number of stop bits, a parity, and a flow control.
6. The method of claim 1, wherein the set of serial port parameters includes baud rate and
5 wherein receiving at least one serial port parameter value includes performing an adaptive baud rate negotiation between the storage controller and an external device connected to the storage controller through the serial port.
7. The method of claim 6, wherein performing an adaptive baud rate negotiation includes:
10 sending a break key sequence from the external device to the storage controller;
determining an amount of time between a start bit and a stop bit; and
obtaining a baud rate based on the amount of time between the start bit and the stop bit.
8. The method of claim 7, wherein obtaining a baud rate based on the amount of time
15 includes performing a look-up of the baud rate in a look-up table.
9. A method of performing an adaptive baud rate negotiation for serial port initialization in a storage controller, wherein the storage controller includes a serial port for connection to an external device, the method comprising:
20 sending a break key sequence from the external device to the storage controller;
determining an amount of time between a start bit and a stop bit; and
obtaining a baud rate based on the amount of time.
10. The method of claim 9, wherein obtaining a baud rate based on the amount of time
25 includes performing a look-up of the baud rate in a look-up table.
11. The method of claim 9, further comprising resending the break key sequence responsive to a timeout condition.

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12. The method of claim 9, further comprising repeating the sending, determining, and obtaining steps until a timer expires.

13. A storage network, comprising:

5 a storage system;

a storage controller, wherein the storage controller provides access to the storage system and wherein the storage controller has a serial port; and

an external device, electrically coupled to the storage controller through the serial port,

10 wherein the storage controller receives at least one serial port parameter value for a set of serial port parameters and initializes the serial port using the received serial port parameter values, wherein the at least one serial port parameter is selectable by an operator.

14. The storage network of claim 13, wherein the storage controller receives the at least one serial port parameter value by presenting a boot menu, wherein the boot menu includes a serial
15 console mode, receiving a user selection of a serial console mode, presenting the serial console mode, and receiving operator selection of at least one serial port parameter value in the serial console mode.

15. The storage network of claim 13, further comprising:

20 a host device, electrically coupled to the storage controller,

wherein the storage controller receives the at least one serial port parameter value from the host device.

16. The storage network of claim 15, wherein the storage controller has a hard-coded

25 password for authenticating an operator of the host device before receiving the at least one serial port parameter values from the host device.

17. The storage network of claim 13, wherein the set of serial port parameters includes at least one of a baud rate, a number of data bits, a number of stop bits, a parity, and a flow control.

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18. The storage network of claim 13, wherein the set of serial port parameters includes baud rate and wherein the external device performs an adaptive baud rate negotiation between the storage controller and the external device.
- 5 19. The storage network of claim 18, wherein the external device performs an adaptive baud rate negotiation by sending a break key sequence from the external device to the storage controller, determining an amount of time between a start bit and a stop bit, and obtaining a baud rate based on the amount of time.
- 10 20. The storage network of claim 19, wherein the external device obtains a baud rate based on the amount of time by performing a look-up of the baud rate in a look-up table.